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Eric Lowe prepares a glass plate to be used for an ambrotype photograph.



A modern-day re-enactor participates in a mountain man/American Indian encampment.

RACHEL CLOUTIER/DESERET NEWS



Images OF THE

'60s

...the 1860s.
Couple's photos
painstakingly

The Salt Lake Tribune photo by RACHEL CLOUTIER

THURSDAY, JUNE 29, 2000



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Two men dressed in Confederate soldiers' uniforms pose for the camera during a recent Civil War re-enactment.

Ambrotypes bridge eras in photography

By Joe Bauman
Deseret News staff writer

ANYONE WHO HAS examined a slightly underexposed negative may have noticed an odd phenomenon. If you hold it in the light with dark material behind it, the negative may look like a positive.

The principle behind the ambro-

OUS authentic



By Joe Bauman

Deseret News staff writer

S CIVIL WAR RE-ENACTORS, Eric and Kat Lowe decided to do something "weird and different."

By profession, the Provo couple are computer specialists. But by avocation, they are among the history buffs who enjoy re-creating the 1860s.

They knew that he could become a modern version of a Civil War soldier. But finding a woman's role was more difficult. Kat was not content to portray a camp washerwoman.

So she hit on an idea — one that has

taken possession of them for the past two years and has now resulted in their producing a remarkable body of art. They would become Civil War photographers.

Unlike most 19th century professions, photography was open to women. In fact, women were daguerreotypists or assistants to daguerreotypists since the first photo studios opened in the 1840s.

A couple of months into the project, she realized it was becoming a huge pain in the neck. "But by then Eric and I were so interested we decided to pursue it anyway."

Insisting on authenticity, the Lowes built everything themselves: a huge view camera, glass-plate holders, chemical baths, the outdoor darkroom on its tripod. Constructing the equipment using early plans, acquiring an 1858 Voightlander & Sohns lens, cracking the old formulas for the photographic chemistry — that took nine or 10 months.

They contacted most of the few experts who practice wet-plate photography, learning much about the process through Internet chats. They consulted Web-based archives and read manuals, both from the 19th century and by modern photographers trying to revive the difficult art.

Then they were ready to make ambrotype photographs.

But the guidebook they were using advised them to clean the glass with ammonia, and ammonia ruined their first batch of chemicals. Also, "we bought the wrong kind of ether to begin with," she said.

Eventually, they corrected these problems and were able to produce these antique-type photos, making the images from scratch. They do every step themselves, from clean-

Kyle and Kat Lowe sews her own clothes just made during



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Photographer Eric Lowe uses ambrotype photography technique

we, above, appear in several modern ambrotypes. She costumed. Below, Eric Lowe holds an ambrotype he has made during the annual Golden Spike ceremony in Promontory.

ERIC LOWE



RAVELL CALL DESERET NEWS



que during the Golden Spike ceremony on May 10 at Promontory in Box Elder County. Lowe built the huge view camera himself.

That is the principle behind the ambrotype, a photograph on a plate of glass, popular in the 1850s and 1860s. It is really a negative with the emulsion on glass instead of our modern film; it's backed with black shellack, paint or other material so that it appears to be a positive.

The name comes from the Greek "ambrotos" for immortal, and type. "Type" was applied to all sorts of photographs, from the earliest daguerreotype introduced in 1839 to the tintype that was in vogue through the early years of the 20th century.

The ambrotype was briefly popular between the times of the other two.

A daguerreotype (named for the inventor, Louis J. M. Daguerre) was made on a copper plate covered with a layer of polished silver. Its surface was so delicate it had to be protected behind glass and kept safe in a small leather case.

The daguerreotype, ambrotype and tintype were all one-of-a-kind photographs. If you wanted another print, a photographer would make a copy daguerreotype. Also like daguerreotypes, ambrotypes are so delicate they had to be protected in cases.

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ing the glass plates to mixing chemicals, pouring emulsion and developing the views.

They take pictures at their home, at Civil War re-enactment events, at gatherings of mountain men and at the recent ceremony at Promontory in Box Elder County marking the anniversary of the completion of the transcontinental railroad.

Sometimes the ambrotypes they make are streaked at the edges because chemicals didn't coat the plate perfectly. Sometimes they carry nicks or scratches from the processing. Children never hold still for the seconds-long exposure so they show up blurred. A flag looks strange because red and blue register differently on the early emulsion.

These things all fit right in, because that's the way the antique photos really are. And the Lowes' views have a powerful, evocative quality.

An ambrotype Eric Lowe made of the costumed celebrants and the replica engines from the "Wedding of the Rails" — Jupiter and No. 119 — has a striking resemblance to a famous wet-plate image that Andrew J. Russell took at the same place exactly 131 years before, on May 10, 1869.

"The biggest enemy is dust," said Eric Lowe.

"You're working outside, the wind is blowing, and dust will stick to the sticky wet collodion," material that helps make up the emulsion. The process is called wet-plate photography because the exposure must be made while the plate is still tacky, or it will lose light sensitivity.

After a piece of glass is cleaned and coated so it is ready for a picture, the photographer ducks into a darkroom to put it in the plate holder. The Lowes' field darkroom, which is on a tripod of its own, isn't really dark. Light streams through a red glass window, which does no damage because the emulsion is blind to red light.

By now, the sticky covering on the glass has turned white. "It looks like somebody poured a thin layer of milk on the glass," he said. The photographer will shake off the extra silver nitrate chemical and put the plate into a lightproof holder. Then he can take it outside.

"You take the plate holder, put it in the camera," Eric Lowe said.

Between watching their 2-year-old, Thad, and chasing 5-year-old Kyle, Kat Lowe will have "aimed the camera, focused it and gotten everything ready," he added.

He pushes the plate-holder into

that covers the glass. Then, watch in hand, he removes the lens cap. Exposures range from 1 second to 30 seconds, depending on humidity, temperature and light intensity. Lens cap returned, the exposure is over.

Before the emulsion dries, he puts the dark slide over the plate holder and carries it to the portable darkroom, where he uses a chemical to develop the plate. "You're looking at the negative image as you're developing it," he said.

Final steps are to fix the plate with sodium thiosulfate, wash it, scrape collodion residue from the unused side, dry the plate and varnish the emulsion so that the image becomes a positive.

The couple has made more than 200 glass positives. Many are by Eric Lowe, sometimes with Kat Lowe posing in period clothing that she sews, but she also makes ambrotypes.

"To be honest, I really like the way these pictures look," Eric Lowe said. He senses a kinship with the great practitioners of photography of the 19th century.

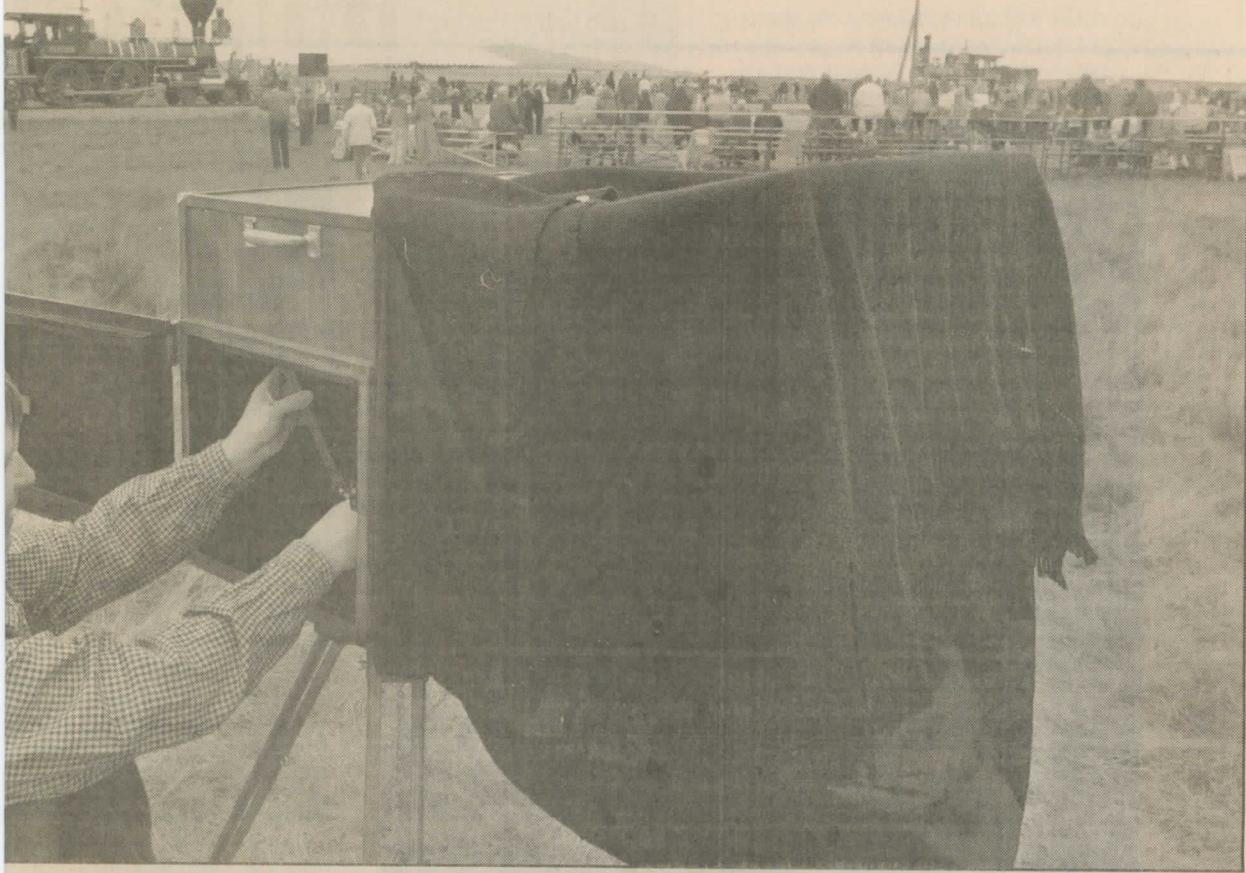
As a woman who enjoys history, Kat Lowe said, re-creating this early art "helps me really appreciate the old photographs more than I did before."

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Above, photographer Eric Lowe makes ambrotypes during ceremonies at Golden Spike National Historic Site. Left, a Civil War re-enactor poses with a flag. The tonal values of the flag look strange because the ambrotype had unusual color sensitivities.

AMBROTIPIES

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But unlike daguerreotypes, with their copper and silver, ambrotypes were relatively inexpensive. They could be made of glass and chemicals, plus the case.

Because of cost, as soon as they were introduced in the middle 1850s, ambrotypes began destroying the daguerreotype market. Ambrotypes became wildly popular by 1857.

But they did not last long. When the Civil War began in 1861, thousands of soldiers on both sides rushed to have their ambrotypes taken for their families. Photographers followed the armies in the fields and soldiers lined up to have images taken.

But all too often, mules carrying the army mail would stumble, or some other accident would jar the ambrotype — and the family back home would get a case full of glass shards. So a similar kind of photograph rapidly gained in popularity.

This was the tintype, a positive made the same way as an ambrotype except that it was taken on a piece of metal, not glass. Contrary to its name, a tintype actually is made on a thin, dark piece of iron, not tin.

The tintype was so tough that it didn't even need a case. It could be sent through the mail, suffering nothing worse than a bend or a rumple. Ambrotypes quickly faded from popularity. By the end of the Civil War in 1865, the art was nearly dead.

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